

## ABSTRACT

A displacement detector is provided, which can compensate a change in temperature coefficient of impedance of a coil to a displacement of a core. The detector comprises a constant-current supply unit for outputting a constant current including an alternating current, a coil portion, to which the constant  
5 current is supplied, a magnetic core supported to be movable relative to the coil portion in a movable range, and a signal processing circuit for determining a displacement of the core to the coil portion according to a change in output voltage of the coil portion under the supply of the constant current to the coil  
10 portion, characteristic-value extracting unit for extracting a characteristic value (V1) from the output voltage of the coil portion, and a level shift circuit for adding a level shift voltage (Vsh) to the characteristic value. A fluctuation width of temperature coefficient of a total (V2) of the characteristic value (V1) and the level shift voltage (Vsh) in the movable range is smaller than the  
15 fluctuation width of temperature coefficient of the characteristic value (V1) in the movable range.

519,797

(12)特許協力条約に基づいて公開された国際出願

(19) 世界知的所有権機関  
国際事務局



(43) 国際公開日  
2004 年11 月18 日 (18.11.2004)

PCT

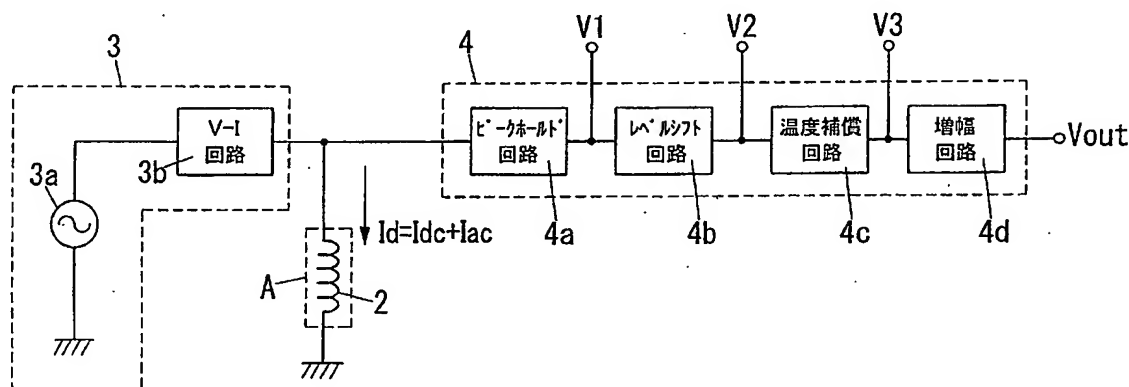
(10) 国際公開番号  
WO 2004/099727 A1

- (51) 国際特許分類: G01D 5/20 Masahisa) [JP/JP]; 〒5718686 大阪府門真市大字門真1048番地 松下電工株式会社内 Osaka (JP).
- (21) 国際出願番号: PCT/JP2004/005830
- (22) 国際出願日: 2004 年4 月22 日 (22.04.2004) (74) 代理人: 西川 恵清, 外(NISHIKAWA, Yoshikiyo et al.); 〒5300001 大阪府大阪市北区梅田1丁目12番17号 梅田第一生命ビル5階 北斗特許事務所 Osaka (JP).
- (25) 国際出願の言語: 日本語
- (26) 国際公開の言語: 日本語
- (30) 優先権データ: 特願2003-117600 2003 年4 月22 日 (22.04.2003) JP
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- (81) 指定国 (表示のない限り、全ての種類の国内保護が可能): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,

[続葉有]

(54) Title: DISPLACEMENT-DETECTING DEVICE

(54) 発明の名称: 変位検出装置



3b...V-I CIRCUIT

4a...PEAK HOLD CIRCUIT

4b...LEVEL SHIFT CIRCUIT

4c...TEMPERATURE COMPENSATION CIRCUIT

4d...AMPLIFICATION CIRCUIT

(57) Abstract: A displacement-detecting device capable of compensating a change in an impedance temperature coefficient of a coil relative a displacement of a core. The displacement-detecting device includes constant current-supplying means for outputting a constant current including alternating current, a coil portion to which the constant current is supplied, a magnetic body core held so as to be movable relative to the coil portion in a predetermined movable range, a signal-processing circuit for obtaining, with the constant current being supplied to the coil portion, a displacement of the core relative to the coil portion based on a change in an output voltage from the coil portion, characteristic value-extracting means for extracting a characteristic value (V1) from the output voltage from the coil portion, and a level shift circuit for adding a level shift voltage (Vsh) to the characteristic value. A temperature

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